

Fam. 15. Reteporidæ.

Smitt has also discarded this family in his latest paper*, and distributed its members. In this I do not see my way to agree with him at present. The structure of the zoarium in *Retepora* is so remarkable and significant that it seems to me to be rightly regarded as the basis of a family. It seems hardly probable that forms exhibiting this marked zoarial peculiarity would be developed sporadically in various groups. It is a more reasonable supposition that the species in which it exists are closely connected genetically.

In taking this view I assume that the structural differences between the zoarium of *Retepora* and that of the other allied Cheilostomata go much beyond the mere reticulate character of the branching†.

Our two British species of this family may be ranked under one genus.

Genus RETEPORA, Lamareck.

Species: *R. Beaniana*, King.

R. Couchii, Hincks.

The foregoing is little more than a mere indication of results. The detailed observations on which they rest and the discussion of doubtful points must be reserved for my 'History.'

No one who has not attempted to frame a natural classification of the Polyzoa can appreciate the peculiar and perplexing difficulties attendant upon the work. Those who have done so will best understand how much indefiniteness must of necessity attach to any system we may devise, how flexible and accommodating it must be to fit in with the facts of nature.

XVIII.—On the Occurrence of a Land-Rail (*Rallus*) in the Island of Aldabra. By Dr. A. GÜNTHER, F.R.S.

IN the year 1876 Commander Wharton started in H.M.S. 'Fawn' on a voyage of survey to the East-African coast; and

* "Recensio systematica Bryoz. quæ ad insulas Novaja Semlja et ad ostium fluminis Jenisei invenerunt Doctores A. Stuxberg et H. Théel," Öfv. Kongl. Vetenskaps-Ak. Förhandl. 1878.

† A difficulty occurs in the case of the *Membranipora sigillata*, Smitt, described in his 'Floridan Bryozoa,' which, according to his account, combines a true Membraniporidan cell with a Reteporine mode of growth. But, on the whole, at present, the reasons for preserving the family seem to me stronger than those for dismembering it. The point requires more extended investigation.

I then took the opportunity of directing his attention to some zoological points which I thought worth investigating, as far as the main object of his mission would permit. Among them I mentioned the fauna of Aldabra.

Commander Wharton visited and surveyed this island, or rather group of islands, in July of last year; and thinking that he would not have withheld his permission, I insert here the following extract from his letter to me, which refers to the Tortoises of the island, and to a remarkable form of Land-Rail, which I propose to describe in this paper.

“H.M.S. ‘Fawn,’ off Zanzibar,
Aug. 16, 1878.

“ I have just come from Aldabra, and after much trouble and search succeeded in getting one tortoise, a female, not very large—3 feet 2 inches in length, measuring over the arch of the carapace. . . . I wanted to get a male, as I know yours died; but this one was the only specimen we saw. I think your mind may be at ease as regards any probability of Aldabra being inhabited: a more uninviting place I never saw; the reports about fine timber &c. are pure fabrications. . . . Former reporters have been misled by the great height the mangrove attains, perfectly useless for any purpose, as you know. The surface of the island, which is an upheaved atoll, is coral rock, jagged and rough to a degree that makes it most laborious to get about, even were it not for a most stubborn and tangled brushwood which covers it and tears one’s clothes and person to pieces. There is not a tree in the island except the mangrove and a few casuarinas. The reptiles are now very scarce; we saw no traces of them, except where we captured our one trophy. There is no soil, no sand even for planting cocoanuts, no water except in the cavities of the coral. Mosquitoes are intolerable; and this is the best season of the year for them. Fishing-parties from the Seychelles are the enemies of the tortoise: those naked negroes know their haunts, and their tough skins do not mind thorns or mosquitoes much; and as they find the tortoises good to eat, they have nearly exterminated them. I am sure I am safe in saying that Aldabra will never be inhabited regularly, unless turtle or fish should become more valuable. We were on the look-out for animals of all kinds; but beyond a land-rail there is nothing. This bird never uses its wings, and was easily caught where the bush was not too thick. I have two alive, and, if you think they are worth any thing, can send them to you. I do not see how they could get to the island unless they are indigenous: the wings are quite small; and they never

even flapped them; the muscles, too, are too weak for flight. Except mosquitoes there was hardly an insect, and none that I did not know; very few spiders of a horned kind and large red ants were the only ones I saw, both African. There was a complete scarcity of all life, except sea-birds, frigate birds, boobies, terns, &c., which were found in thousands."

Thus the dove which is said to occur in Aldabra (*Turtur aldabranus*) does not appear to have been seen by Captain Wharton.

The two rails mentioned by Capt. Wharton seem to have died shortly after the date of his letter; for I received from him in December last two skins, one of which, at least, shows by the shortening of the claws that it had been kept in captivity. They are so similar to *Rallus gularis* from Madagascar in size and coloration, that, on first inspection, their identity with that bird seems beyond a question. The rufous colour of the head, neck, and chest, the blackish longitudinal streaks on the back, the sharply defined white patch on the throat, the white- and black-banded under wing-coverts, the white under tail-coverts, and, in the adult, the red coloration of the basal portion of the beak are exactly as in the typical form from Madagascar*. Of the two specimens one is *adult*: its abdomen and the tibial feathers are of a uniform dull brown colour; and the under wing-coverts are greyish ash with narrow white fasciolæ. In the *younger* bird the abdominal and tibial feathers are brownish grey, neatly banded with white, each feather having a rufous tinge towards the tip. The under wing-coverts are nearly black, and the white bands broader than in the adult. This stage of plumage is exactly the same as in two specimens from Madagascar in the British Museum. Thus, with regard to coloration, there is nothing to indicate any difference between the Madagascar and Aldabra birds.

Neither is there any difference as regards size generally. On the other hand, an incipient reduction in the length of the wing is very conspicuous; this might have been expected as the consequence of insulation within so small an area. But, singularly, this reduction is not compensated by a greater development of the legs; on the contrary, the legs have become shorter (and weaker) in the Aldabra bird, as will be seen from the accompanying measurements:—

* Hartlaub (*Vögel Madagascar's*, p. 337) introduces into his diagnosis of this bird, "uropygio pallidissime rufescente fasciolato." In the four specimens I have examined, the uropygial feathers are of the same uniform brown, which is the principal colour of the feathers of the back.

<i>Rallus gularis</i> from	Bill. millim.	Wing. millim.	Tarsus. millim.	Middle toe (without claw). millim.
Madagascar, no. 1 (jun.) .	41	148	49	44
„ no. 2 (jun.) .	39	147	46	41
Aldabra (junr.)	44	119	42	38
„ (adult)	45	116	42	34.5

From these measurements it would also appear that the bill (which I have measured along the culmen) is slightly longer in the Aldabra specimens. Hartlaub, who gives the measurements of five Madagascar specimens (including one from the Mauritius), states the length of the bill to vary between 41 and 43 millims., the longest bill observed by him thus being still 1 millim. shorter than in the Aldabra specimen.

The least difference in the length of the wings of our Aldabra and Madagascar specimens is as much as 28 millims. But in four Madagascar specimens examined by Hartlaub the wings were still longer than in ours, viz. 160-162 millims.; and only in one example, that from Mauritius, does he give the length as low as 145 millims. Thus Capt. Wharton's observation that the Aldabra bird never uses its wings is quite in accordance with the actual condition of the organ of flight, and could only be confirmed by an examination and comparison of the bones, if they were available for that purpose. Indeed, as far as it is possible to measure the bones covered by the skin, I have ascertained that the forearm of a Madagascar specimen measures 44 millims., whilst that of an Aldabra example is only 33 millims. long.

Less conspicuous than the reduction of the wing, is that of the leg; yet the fact that both our Aldabra specimens have a shorter tarsus than any of the specimens from Madagascar of which the measurements are known, and that more especially the middle toe is conspicuously shorter, is sufficiently significant to deserve the attention of future observers. Of the specimens examined by Hartlaub two had a tarsus of 52, one of 47, one of 45, and one of 43 millims. The minimum length of the tarsus observed by Schlegel and Pollen (Faune de Madag. Mammif. et Ois. p. 134) was 20½ lines = 47 millims.

Rallus gularis is a native of Madagascar, in which island, especially in the northern half, it is common: one specimen only, the type in the Paris Museum, is said to have been brought from Mauritius; but this is evidently only an isolated instance of an individual having strayed to Mauri-

tius. It never colonized that island, as has been the case in Aldabra. It is, of course, impossible to say by what means the bird, which is not a strong flier in its native country, reached Aldabra, an island in a direct line considerably nearer to Madagascar than Mauritius; but no one can doubt that the Aldabra race is a direct descendant from the Madagascar type, which having reached an island in which there was no occasion for exercising its power of flight, disused a mode of locomotion naturally distasteful to it. As an immediate consequence, the muscles and bones of the wing became aborted; and if we are allowed to judge from our domestic aquatic birds, the shortening of the limb, as we observe it in the Aldabra bird, may have been effected within a very limited number of generations. In such a case it seems to me as great an error to efface the evidence of close relationship by giving a distinct binomial term to the descendant race as it would be not to distinguish it at all from the parent type; and no method appears to me to be more appropriate and expressive than to designate the Aldabra bird as *Rallus gularis*, var. *aldabrana*.

XIX.—*On two Races or Subspecies of Indian Birds inhabiting Ceylon.* By Captain W. V. LEGGE, R.A., F.Z.S., &c.

Acridotheres melanosternus, n. subsp.

A comparison of the entire series of *Acridotheres tristis* in the national collection, from all parts of India, as well as from localities into which the Indian species has been introduced, such as the Mauritius and Bourbon, has convinced me of the propriety of separating the Ceylonese race; and for it I propose the above title.

Messrs. Blyth and Jerdon pointed out many years ago that the Ceylon birds of this species were darker than the Indian. The former, in his Catalogue of the Birds of the Asiatic Society's Museum (1849), has the following remark:—"No. 574, *Dark variety* from Ceylon. Presented by Dr. Templeton." Jerdon follows, in his 'Birds of India,' vol. ii., with "those from Ceylon appear to be always darker." It is true the Ceylon race is much darker, both as regards the coloration of the upper surface and the hue of the flanks; but the writers in question appear to have overlooked a feature in the plumage of the bird which is constant in the Ceylon race and always absent in the Indian, viz. that the black of the throat descends down the centre of the breast, and passes round above the white